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GROUP 3700

[L]ongitudinal-[T]orsional resonator excited by the electro-mechanical transducer at a frequency for providing combined longitudinal and torsional motion in frequency synchronism, the longitudinal-torsional resonator [mechanically that is] mechanically joined to

a tip shaped for cutting of [in contact with] biological tissue.

2. (Once amended.) [A] The system of claim 1 where the electro-mechanical transducer is a longitudinal transducer.
3. (Once amended.) [A] The system of claim 1 where the electro-mechanical transducer is a torsional transducer.
4. (Once amended.) An ultrasonic longitudinal-torsion tissue dissection system comprising an

electrical generator supplying alternating electrical voltage and current by connection to

an electro-mechanical transducer excited by the electrical generator, the electro-mechanical transducer [that is] joined mechanically to a

[L]ongitudinal-[T]orsional resonator excited by the electro-mechanical transducer at a frequency for providing combined longitudinal and torsional motion in frequency synchronism, the longitudinal-torsional resonator [mechanically that is] mechanically joined to a tip shaped for cutting of [in contact with] biological tissue[.]

a source of irrigation fluid connected to

said [L]ongitudinal-[T]orsional resonator.

5. (Once amended.) [A] The system of claim [1] 4 where the electro-mechanical transducer is a piezo longitudinal transducer.
6. (Once amended.) [A] The system of claim [1] 4 where the electro-mechanical transducer is a piezo torsional transducer.
7. (Once amended.) [A] The system of claim 4 where said source of irrigation fluid is connected to said electro-mechanical transducer.
8. (Once amended.) An ultrasonic longitudinal-torsion tissue dissection system comprising an

electrical generator supplying alternating electrical voltage and current by connection to

an electro-mechanical transducer excited by the electrical generator, the electro-mechanical transducer [that is] joined mechanically to a

[L]longitudinal-[T]torsional resonator excited by the electro-mechanical transducer at a frequency for providing combined longitudinal and torsional motion in frequency synchronism, the longitudinal-torsional resonator [mechanically that is] mechanically joined to a tip [in contact with] shaped for dissecting biological tissue[.],

a vacuum source connected to

said [L]longitudinal-[T]torsional resonator.